

=> D HIS

(FILE 'HOME' ENTERED AT 11:56:05 ON 04 DEC 2003)

=> S (FIBER OR FIBRE) (L) REINFORCED (L) (MOULDED OR MOLDED) (L) ARTICLE  
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| COST IN U.S. DOLLARS | ENTRY      | SESSION |
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FILE COVERS 1907 - 4 Dec 2003 VOL 139 ISS 23  
FILE LAST UPDATED: 3 Dec 2003 (20031203/ED)

This file contains CAS Registry Numbers for easy and accurate  
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=> S (FIBER OR FIBRE) (L) REINFORCED (L) (MOULDED OR MOLDED) (L) ARTICLE  
455873 FIBER  
485220 FIBERS  
629415 FIBER  
    (FIBER OR FIBERS)  
2876 FIBRE  
1890 FIBRES  
4582 FIBRE  
    (FIBRE OR FIBRES)  
123393 REINFORCED  
331 MOULDED  
119479 MOLDED  
84674 ARTICLE  
70187 ARTICLES  
142612 ARTICLE  
    (ARTICLE OR ARTICLES)  
L1 301 (FIBER OR FIBRE) (L) REINFORCED (L) (MOULDED OR MOLDED) (L) ARTICLE

=> S POLYAMIDES OR POLYESTERS OR POLYCARBONATES OR POLYURETHANES OR POLYUREA OR  
POLYOLEFINS OR POLYSTYRENES OR POLYACRYLNITRILES OR POLYVINYL CHLORIDE OR  
POLYVINYLIDENE CHLORIDE OR POLYVINYL ALCOHOL OR POLYTETRAFLUOROETHYLENE  
89780 POLYAMIDES  
183179 POLYESTERS  
46142 POLYCARBONATES  
69020 POLYURETHANES  
8292 POLYUREA

7201 POLYUREAS  
 9945 POLYUREA  
       (POLYUREA OR POLYUREAS)  
 46726 POLYOLEFINS  
 3997 POLYSTYRENES  
       0 POLYACRYLNITRILES  
 74282 POLYVINYL  
       162 POLYVINYL  
 74398 POLYVINYL  
       (POLYVINYL OR POLYVINYL)  
 969597 CHLORIDE  
 149295 CHLORIDES  
 1037620 CHLORIDE  
       (CHLORIDE OR CHLORIDES)  
 13636 POLYVINYL CHLORIDE  
       (POLYVINYL (W) CHLORIDE)  
 9625 POLYVINYLIDENE  
       9 POLYVINYLIDENES  
 9631 POLYVINYLIDENE  
       (POLYVINYLIDENE OR POLYVINYLIDENES)  
 969597 CHLORIDE  
 149295 CHLORIDES  
 1037620 CHLORIDE  
       (CHLORIDE OR CHLORIDES)  
 2358 POLYVINYLIDENE CHLORIDE  
       (POLYVINYLIDENE (W) CHLORIDE)  
 74282 POLYVINYL  
       162 POLYVINYL  
 74398 POLYVINYL  
       (POLYVINYL OR POLYVINYL)  
 208349 ALCOHOL  
 142977 ALCOHOLS  
 325249 ALCOHOL  
       (ALCOHOL OR ALCOHOLS)  
 528710 ALC  
 176050 ALCS  
 618762 ALC  
       (ALC OR ALCS)  
 733358 ALCOHOL  
       (ALCOHOL OR ALC)  
 34636 POLYVINYL ALCOHOL  
       (POLYVINYL (W) ALCOHOL)  
 12649 POLYTETRAFLUOROETHYLENE  
       54 POLYTETRAFLUOROETHYLENES  
 12690 POLYTETRAFLUOROETHYLENE  
       (POLYTETRAFLUOROETHYLENE OR POLYTETRAFLUOROETHYLENES)  
 L2 432081 POLYAMIDES OR POLYESTERS OR POLYCARBONATES OR POLYURETHANES OR  
       POLYUREA OR POLYOLEFINS OR POLYSTYRENES OR POLYACRYLNITRILES OR  
       POLYVINYL CHLORIDE OR POLYVINYLIDENE CHLORIDE OR POLYVINYL ALCOH  
       OL OR POLYTETRAFLUOROETHYLENE

=> S (FIBERS OR FIBRES) (L) (GLASS OR SLAG OR STONE OR CERAMICS OR QUARTZ OR SILICA  
 GLASS OR BORON OR SILICON CARBIDE OR BORON NITRIDE OR BORON CARBIDE OR ALUMINUM  
 OXIDE OR ZIRCONIUM OXIDE OR STEEL OR ALUMINUM OR TUNGSTEN OR CARBON OR  
 MONOCRYSTALLINE CORUNDUM OR SILICON CARBIDE)

485220 FIBERS  
       1890 FIBRES  
 624087 GLASS  
 118268 GLASSES  
 649844 GLASS  
       (GLASS OR GLASSES)  
 82286 SLAG  
 51306 SLAGS  
 90545 SLAG  
       (SLAG OR SLAGS)

=> S L1 AND L2 AND L3 AND L4  
L5 6 L1 AND L2 AND L3 AND L4

=> D L5 1-6 BIB,ABS

L5 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 2003:282799 CAPLUS  
DN 138:288997  
TI Moldable high performance nonwoven, woven, and knit forms  
IN Stanitis, Gary; Cistone, Frank; Choi, Jin  
PA Xtreme Fibers, Inc., USA; Lantor, Inc.  
SO PCT Int. Appl., 19 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO.    | KIND | DATE   | APPLICATION NO. | DATE     |
|----|---------------|------|--|-----------------|----------|
| PI | WO 2003029541 | A1   | 20030410   | WO 2002-US31255 | 20020930 |
|    | W:            |      | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |                 |          |
|    | RW:           |      | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |                 |          |

PRAI US 2001-326745P P 20011002

AB The invention is related to a web or fabric made with high performance **fibers** or filaments having properties such as high melting, chem. resistance, non- burning, strong, non-wetting, high purity. The web also contains **fibers** or filaments with individual deniers between 0.5 and 300 made from melt processable perfluoropolymers. The fabric is thermally treated so as to allow the melt processable perfluoropolymer **fibers** (e.g., PTFE **fibers**) and yarns to partially, or fully, melt and adhere to the other **fibers** in the web or fabric matrix. The fabric or web is capable of being **molded**, drawn, or formed using pressure or vacuum prior to the thermal treatment process, then fixed into place during the thermal treatment process, making a high performance fabric or web **article**.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 2003:42495 CAPLUS  
DN 138:90740  
TI **Carbon** fiber-reinforced base materials for composites with high compression strength after impact comprising fabrics of **carbon** fiber bundles having specified modulus and breaking energy and having specified polymer content and preforms and composites therefrom  
IN Wadahara, Eisuke; Nishimura, Akira; Horibe, Ikuo  
PA Toray Industries, Inc., Japan  
SO PCT Int. Appl., 59 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

|    | PATENT NO.    | KIND | DATE  | APPLICATION NO. | DATE     |
|----|---------------|------|---|-----------------|----------|
| PI | WO 2003004758 | A1   | 20030116  | WO 2002-JP6696  | 20020702 |
|    | W:            |      | US  |                 |          |
|    | RW:           |      | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, |                 |          |

LU, MC, NL, PT, SE, SK, TR

JP 2003082117 A2 20030319 JP 2002-126065 20020426  
PRAI JP 2001-203263 A 20010704  
JP 2002-126065 A 20020426

AB The **carbon fiber**-reinforced base materials (A1) comprise **fabrics** (A) of **carbon fiber** bundles comprising multiple **carbon fiber** filaments and exhibiting tensile modulus .gtoreq.210 GPa and breaking energy .gtoreq.40 MJ/m<sup>3</sup>, and polymers (B) adhered to the **fabrics** with B polymer content 1-20 **parts** per 100 **parts** A **fabric**, or the **carbon fiber**-reinforced base materials comprise A1 base materials exhibiting air permeation rate 10-200 cm<sup>3</sup>/cm<sup>2</sup>-s, or the **carbon fiber**-reinforced base materials having B polymers adhered to the surface of A **fabrics** in the dotted form with diam. of the dots .ltoreq.1 mm, or the **carbon fiber**-reinforced base materials comprise A1 base materials having B polymers existing on the surface of B **fabrics** in the noncontinuous form, or the **carbon fiber**-reinforced base materials comprise A1 base materials having the m.p. or flow initiation temp. of B polymers 50-150.degree., or the **carbon fiber**-reinforced base materials comprise A1 base materials having polymers (C) showing no soly. or flowability at the m.p. or the flow initiation temp. of B polymers adhered to A **fabrics** with C polymer content 1-10 **parts** per 100 **parts** A **fabric**. The preforms (D) comprise laminates of .gtoreq.2 of A1 base material and have the base materials bonded together by B or C polymers. The composites essentially comprise D preforms impregnated with polymers other than B polymers. The composites are useful for primary structures, secondary structures, external materials, interior materials, and **parts** for aircrafts, automobiles, and ships. A **woven fabric** comprising polyacrylonitrile-type **carbon fiber** bundles with no. of filaments 24,000, tensile strength 5830 MPa, modulus 294 GPa, and breaking energy 58 MJ/m<sup>3</sup> as warp yarns and glass **fiber** bundles as auxiliary filling yarns was prepd., coated with a particulate polymer compn. contg. 60% polyether sulfone (Sumikaexcel 50003P) and 40% epoxy resin (AK-601) to form a **fabric** with polymer compn. content 10 **parts** per 100 **parts** **fabric**, heated at 180-200.degree. by IR rays, pressed, cooled, and wound to give a **carbon fiber**-reinforced base material 0.36 mm thick and showing air permeation rate 23.7 cm<sup>3</sup>/cm<sup>2</sup>-s and cover factor 99%. A laminate of the base material was vacuum **molded** in the cavity of a mold for 1 h at mold temp. 80.degree. to give a preform. The preform was impregnated with a compn. contg. Araldite MY-721, Epikote 825, AK-601, Epiclon HP-7200L, Epicure W, 3,3'-diaminodiphenyl sulfone, and Sumicure S and cured 2 h at 180.degree. in a mold to give a composite showing no pin holes and no voids and exhibiting compression strength at normal temp. after impact 248 MPa and compression strength at high temp. after heat-treatment in the wet state 972 MPa.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:10652 CAPLUS  
DN 132:65112  
TI Hydroxy-phenoxy ether polymer fiber-reinforced composites with thermoplastic processability and composite manufacture  
IN Brennan, David J.; White, Jerry E.; Calhoun, Daryl R.  
PA The Dow Chemical Company, USA  
SO U.S., 9 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE  |
|------------|------|-------|-----------------|-------|
| -----      | ---- | ----- | -----           | ----- |

PI US 6011111 A 20000104 US 1993-138300 19931018  
 PRAI US 1993-138300 19931018  
 AB A thermoplastic composite is prepd. by applying a hydroxy-phenoxyether polymer onto the surface of reinforcing **fibers** or by the in-situ polymn. of mixts. of diepoxides and difunctional species in the presence of reinforcing **fibers**. The composites can be **molded** into shaped **articles** useful for structural materials and **parts** by conventional thermoforming or other fabrication techniques. A composite was prepd. by molding a mixt. of DER 332 and monoethanolamine in the presence of a glass **fiber/carbon fiber woven fabric** to give a thermoformable composite having tensile modulus 2.2 .times. 106 psi.  
 RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1999:409494 CAPLUS  
 DN 131:74583  
 TI Manufacture of molded fabric-reinforced sheet-like friction materials with high tensile strength and abrasion resistance  
 IN Sato, Yuji; Takase, Kazuhiko  
 PA Toshiba Tungaloy Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | JP 11173354   | A2   | 19990629 | JP 1997-361741  | 19971210 |
| PRAI | JP 1997-361741  |      | 19971210 |                 |          |
| AB   | The friction materials are prepd. by laying pastes (A) contg. friction materials on reinforcing <b>woven</b> and/or nonwoven <b>fabrics</b> in a mold, molding the compns. by a screen-printing transfer method, and heat-treating the moldings to give friction materials essentially contg. a layer comprising the <b>fabrics</b> impregnated with A pastes. The friction materials are useful for brakes, clutches, and sliding <b>parts</b> (no data). A paste contg. 60:5:35 (vol. ratio) mixt. of pulp <b>fibers</b> , SiO <sub>2</sub> , and phenolic resin was <b>molded</b> in a <b>carbon fiber woven fabric</b> -covered mold cavity by a screen-printing method and pressed 5 h at 230.degree. and 10 kg/cm <sup>2</sup> to give a ring-shaped disk friction material with av. breaking strength 310 kg/cm <sup>2</sup> . |      |          |                 |          |

L5 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1998:219850 CAPLUS  
 DN 128:231134  
 TI Hydroxyphenoxyether polymer thermoplastic composites  
 IN Brennan, David J.; White, Jerry E.; Calhoun, Daryl R.  
 PA Dow Chemical Co., USA  
 SO PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---|------|----------|-----------------|----------|
| PI | WO 9814498  | A1   | 19980409 | WO 1996-US15697 | 19960930 |
|    | W: FI, JP, KR<br>RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |          |
|    | EP 929590   | A1   | 19990721 | EP 1996-936089  | 19960930 |
|    | EP 929590   | B1   | 20020529 |                 |          |
|    | R: DE, FR, GB   |      |          |                 |          |
|    | JP 2001501248   | T2   | 20010130 | JP 1998-516460  | 19960930 |
|    | FI 9900448  | A    | 19990302 | FI 1999-448     | 19990302 |

PRAI WO 1996-US15697 W 19960930

AB A thermoplastic composite is prepd. by applying a hydroxy-phenoxyether polymer onto the surface of reinforcing **fibers** or by the in situ polymn. of mixts. of diepoxides and difunctional species in the presence of reinforcing **fibers**. The composites can be **molded** into shaped **articles** useful for structural materials and **parts** by conventional thermoforming or other fabrication techniques. A composite was prepd. by molding a mixt. of DER 332 and monoethanolamine in the presence of a glass **fiber/carbon fiber woven fabric** to give a thermoformable composite.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN

AN 1986:444359 CAPLUS

DN 105:44359

TI Laminates

IN Cole, Bill W.; Brooks, Gary T.

PA Amoco Corp., USA

SO U.S., 17 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

|      | PATENT NO.                                    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | US 4579773                                    | A    | 19860401 | US 1984-642405  | 19840820 |
|      | JP 61069841                                   | A2   | 19860410 | JP 1985-181581  | 19850819 |
|      | EP 178762                                     | A2   | 19860423 | EP 1985-305924  | 19850820 |
|      | EP 178762                                     | A3   | 19870624 |                 |          |
|      | EP 178762                                     | B1   | 19930113 |                 |          |
|      | R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE |      |          |                 |          |
|      | AT 84557                                      | E    | 19930115 | AT 1985-305924  | 19850820 |
| PRAI | US 1984-642405                                |      | 19840820 |                 |          |
|      | EP 1985-305924                                |      | 19850820 |                 |          |

AB Heat-resistant continuous **fibers** impregnated with solns. of **polyamide**-polyimides are useful in the manuf. of laminates for the replacement of metals. Thus, stirring 4,4'-oxydianiline 99.6, m-phenylenediamine, N-methylpyrrolidone (I) 604, trimellitic anhydride chloride 142.5, and trimellitic anhydride 6.8 **parts** for 2.5 h at 77-95.degree. F gave **polyamide**-polyimide (II). **Woven** SiC **fabric** was impregnated with a 30% I soln. of II, and dried 4 days at room temp., 2 h at 250.degree. F, 1 h at 300.degree. F, and 1 h at 400.degree. F to solvent content 1.5%. Four prepreps were **molded** at 660.degree. F, 600.degree. F/500 psig, and 300.degree. F/500 psig to give a laminate with good phys. properties.

=> LOG Y

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| 37.66      | 37.87   |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| -3.91      | -3.91   |

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STN INTERNATIONAL LOGOFF AT 15:15:59 ON 09 SEP 2003

=> FILE CAPLUS

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| 0.21       | 0.21    |

FULL ESTIMATED COST